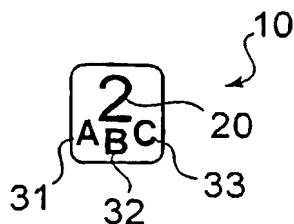
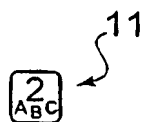


## Micro Cellphone Keybutton Tops (or Keycaps)



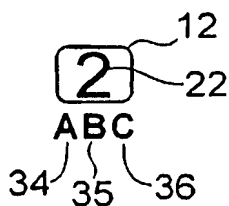
Alphabetic legend ON keycap (enlarged from actual size)

FIG. 1A



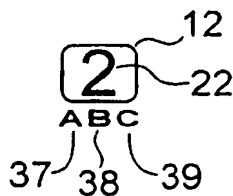
Actual size keycap

FIG. 1B



Number on keybutton top plus alphabetic legend on stretched material

FIG. 1C



When stretched material relaxed for storage, legend shrinks.  
But, keybutton top stays same size.

FIG. 1D

# Micro Cellphone Keyboard Operation (Shown Enlarged)

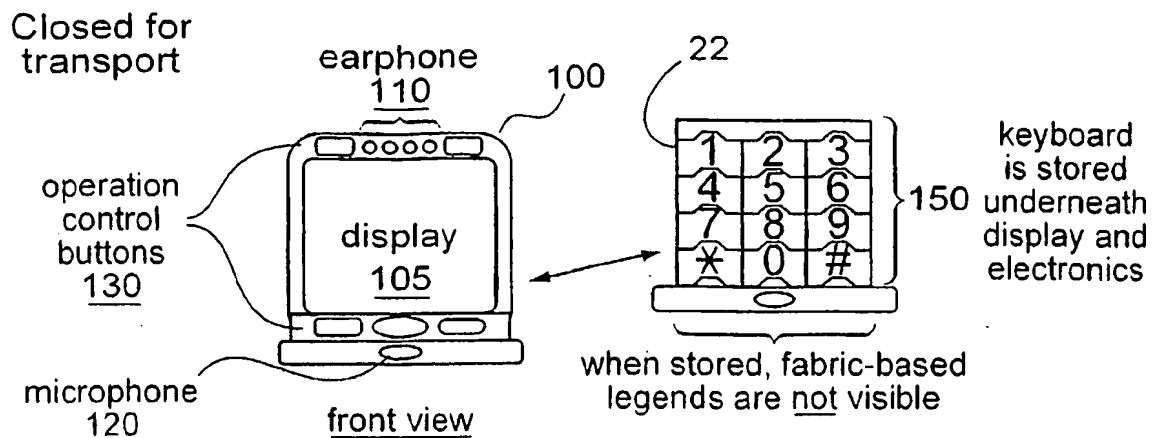


FIG. 2A

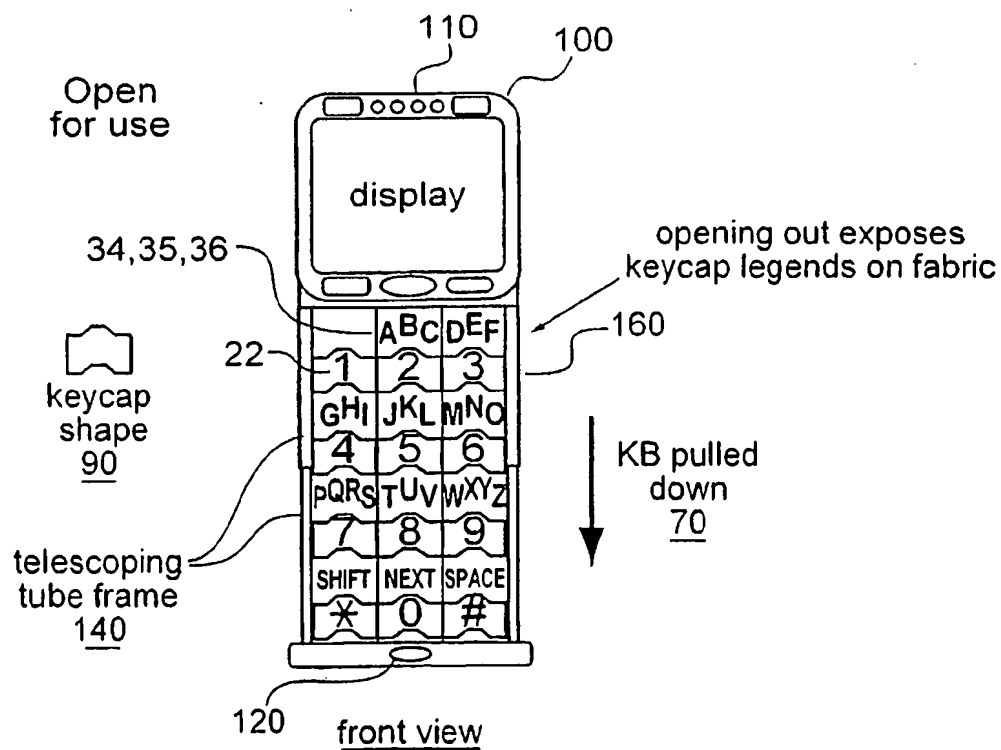
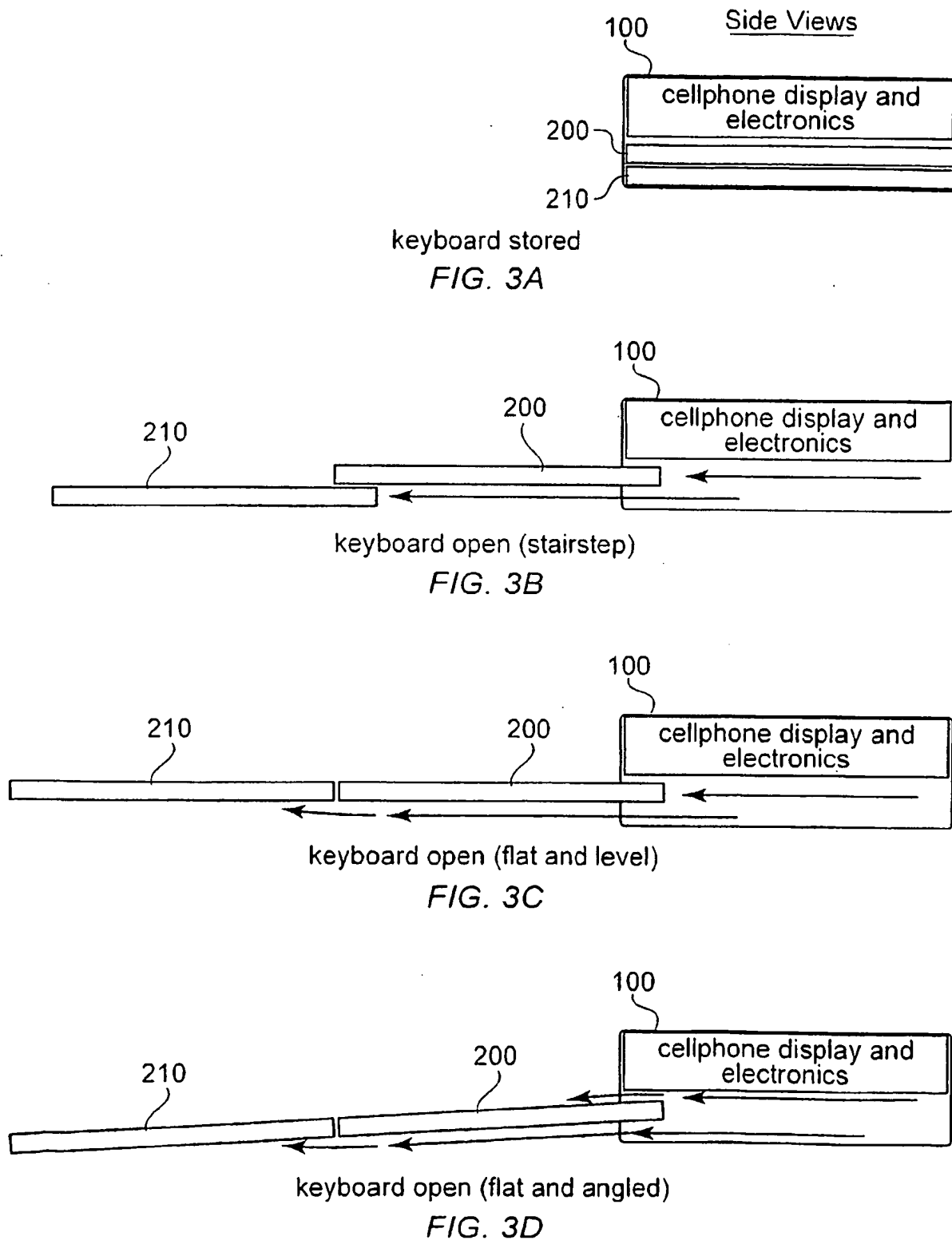


FIG. 2B

## Two drawer Keyboard for micro cellphone



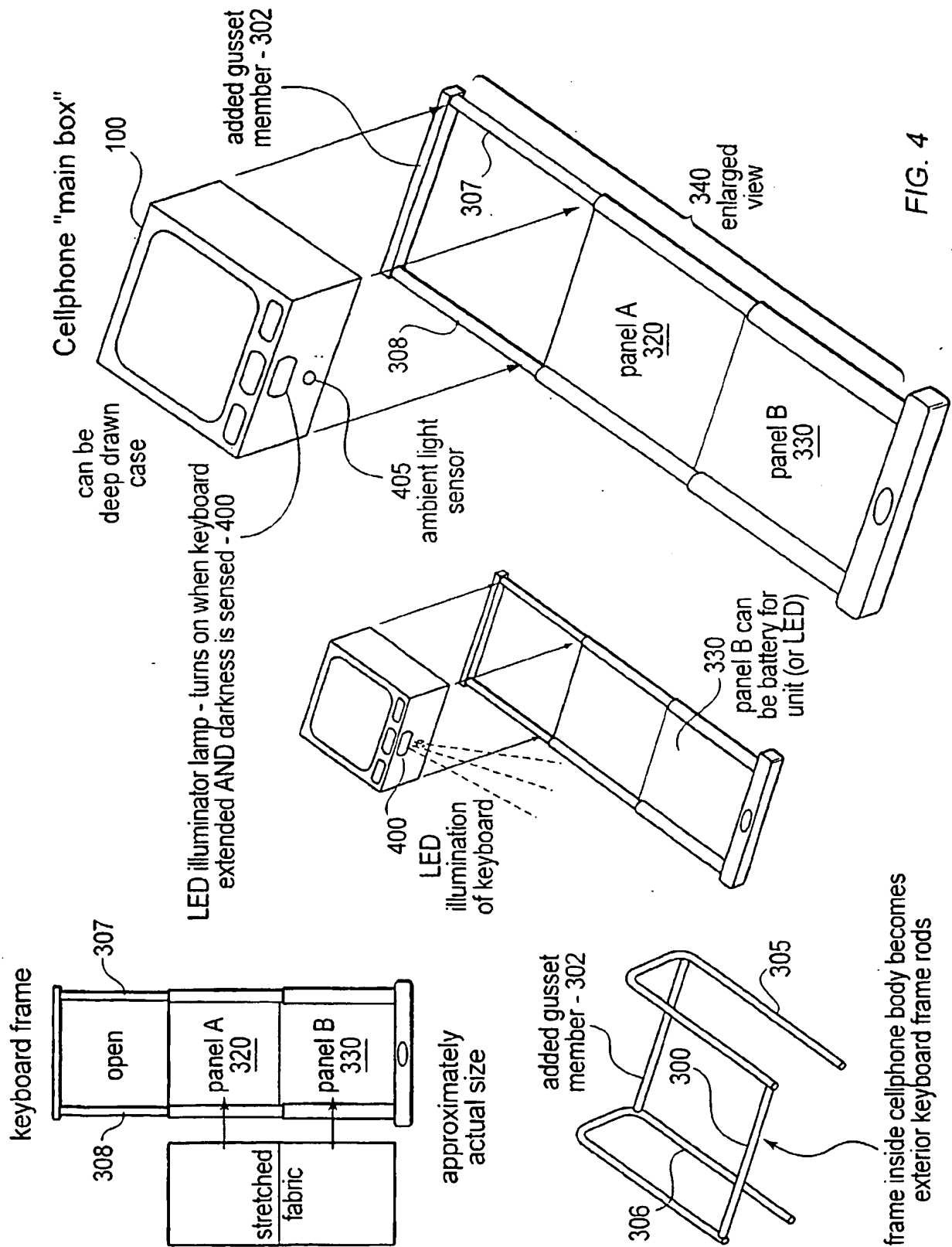
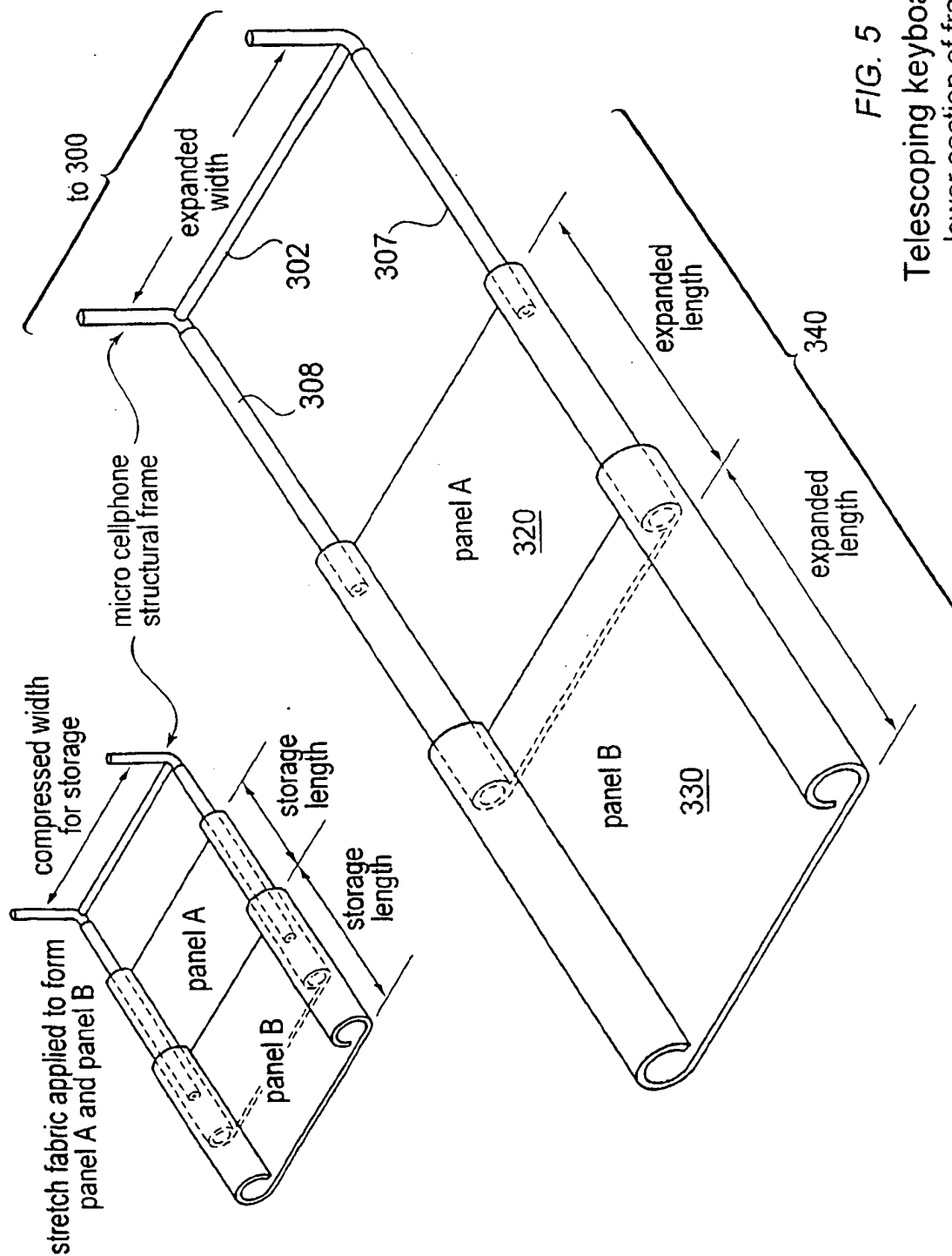
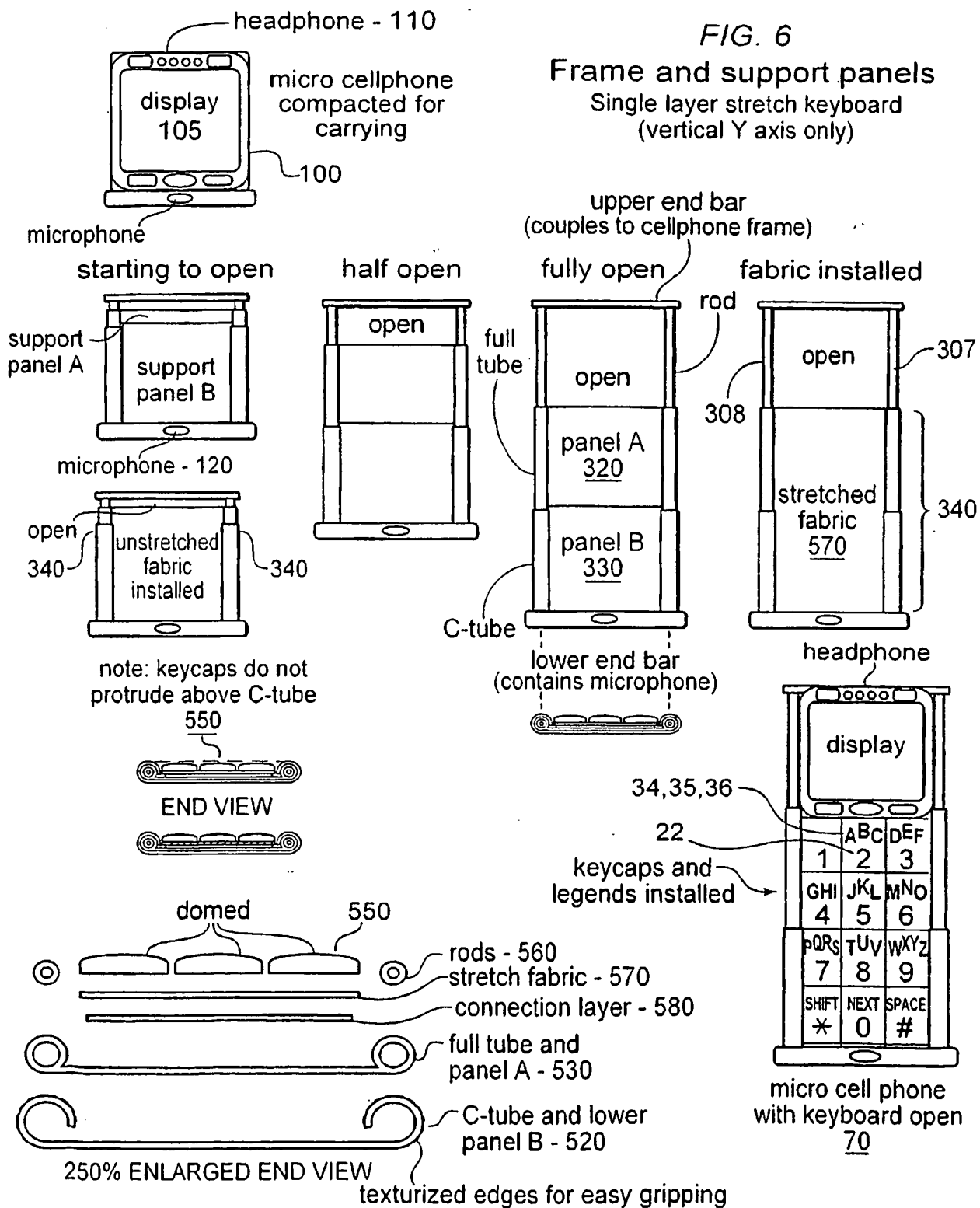


FIG. 4





Stretch keyboard for cellphone  
(greatly enlarged over actual size)

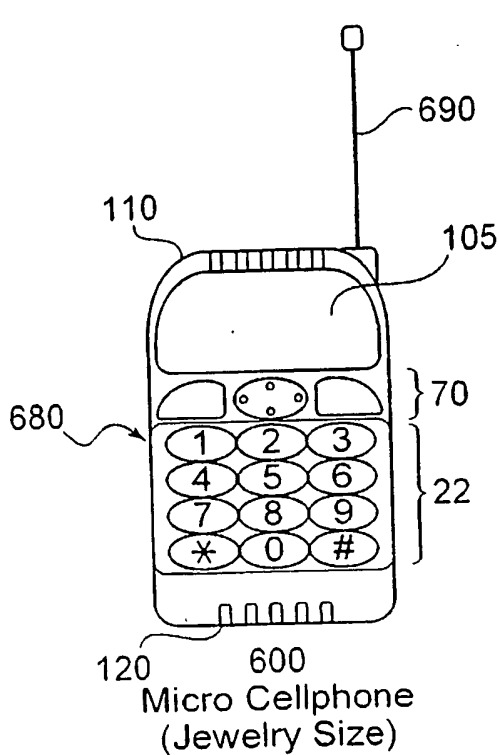


FIG. 7A

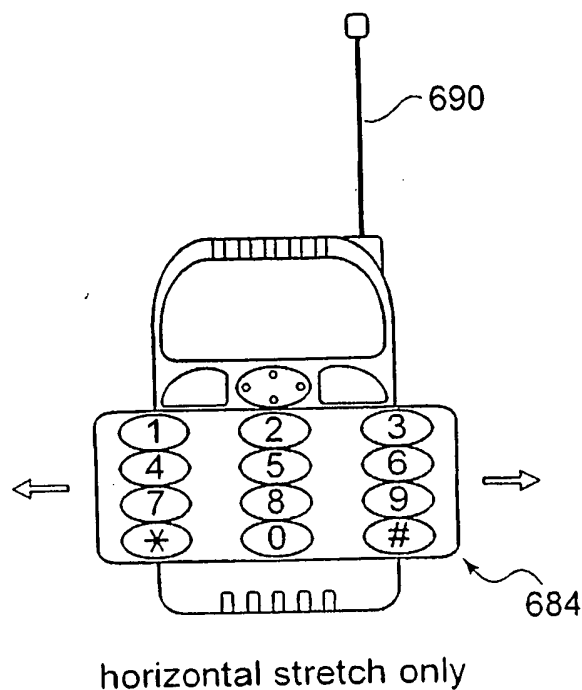


FIG. 7B

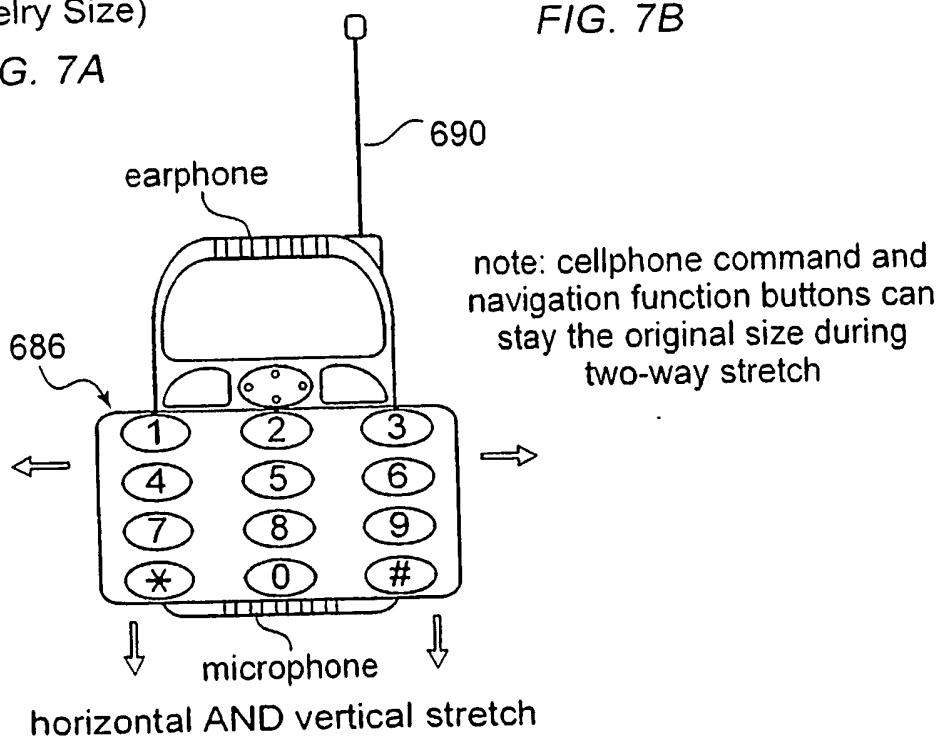
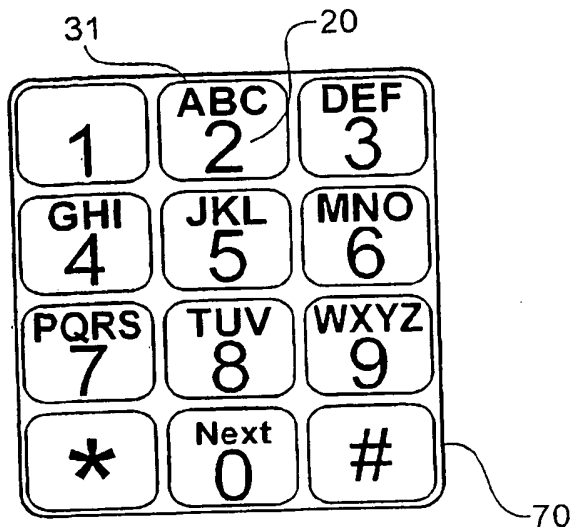


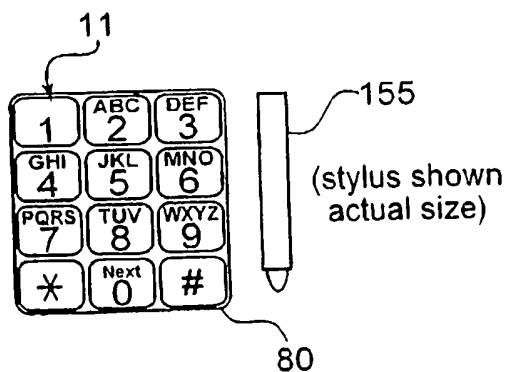
FIG. 7C

## Letter assignments for numeric keys



letter layout takes over available space above number, shown here twice actual size

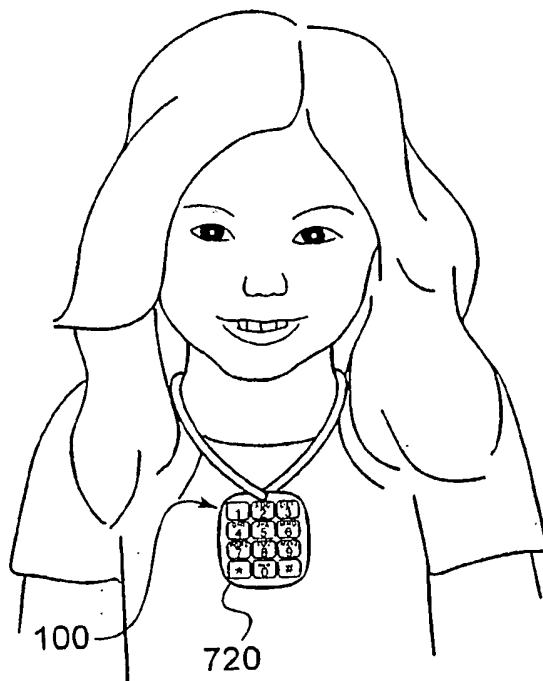
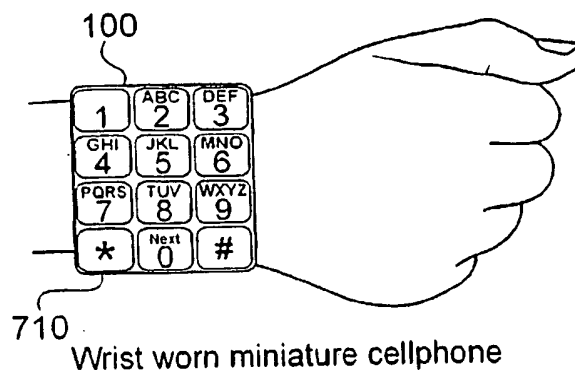
FIG. 8A



letter layout takes over entire display screen, shown here only slightly larger than actual size

FIG. 8B

letter layout takes over entire display screen, shown here twice actual size

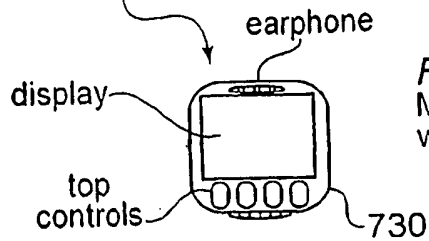


Miniature cellphone worn as pendant

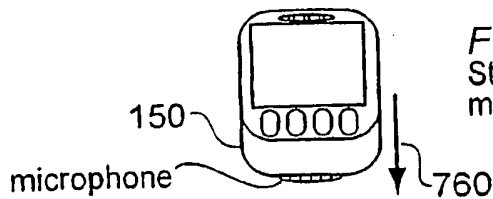
FIG. 8D



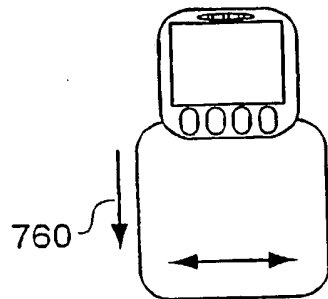
Cellphone case (can be attached to wristband or worn as pendant)



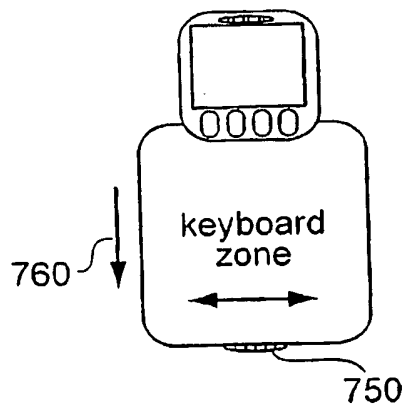
**FIG. 9A**  
Miniature Cell Phone  
with keyboard stored



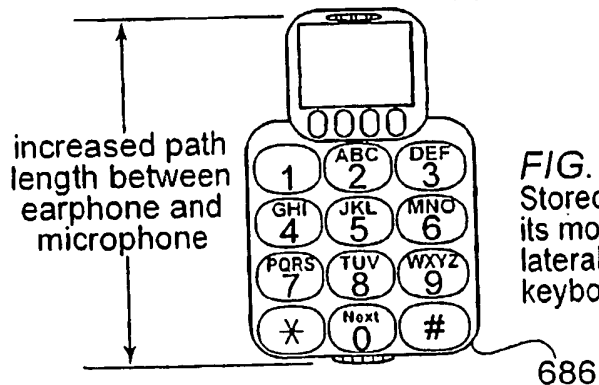
**FIG. 9B**  
Stored keyboard  
moves downward



**FIG. 9C**  
Stored keyboard continues to  
move downward and begins  
lateral expansion

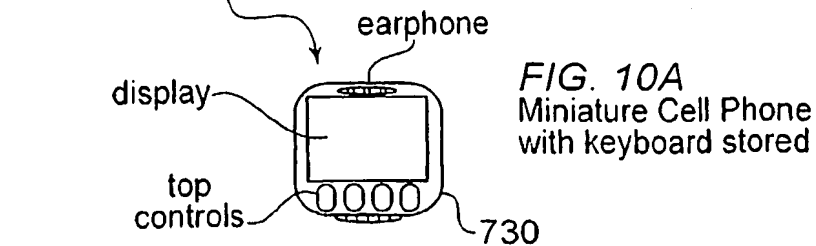


**FIG. 9D**  
Stored keyboard completes its  
move downward and completes  
lateral expansion

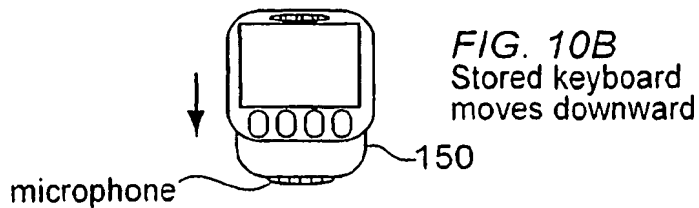


**FIG. 9E**  
Stored keyboard has completed  
its move downward and completed  
lateral expansion, and the actual  
keyboard is shown

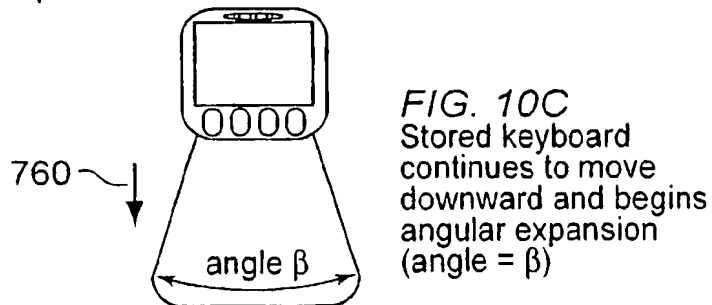
Cellphone case (can be attached to wristband or worn as pendant)



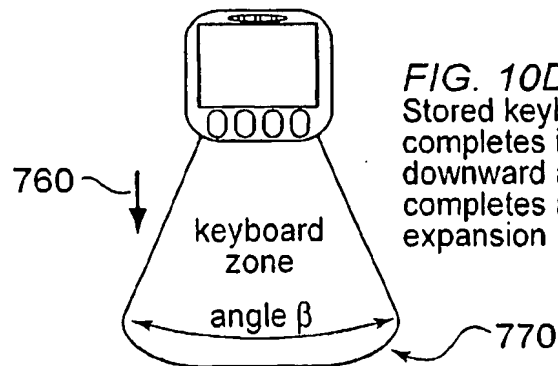
**FIG. 10A**  
Miniature Cell Phone  
with keyboard stored



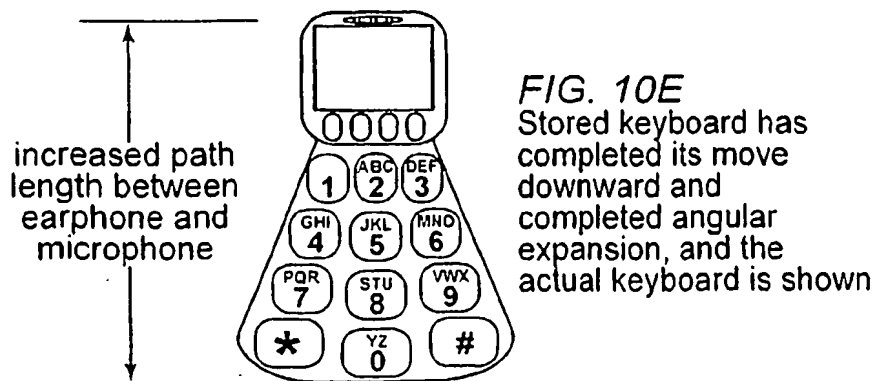
**FIG. 10B**  
Stored keyboard  
moves downward



**FIG. 10C**  
Stored keyboard  
continues to move  
downward and begins  
angular expansion  
(angle =  $\beta$ )



**FIG. 10D**  
Stored keyboard  
completes its move  
downward and  
completes angular  
expansion



**FIG. 10E**  
Stored keyboard has  
completed its move  
downward and  
completed angular  
expansion, and the  
actual keyboard is shown

**FIG. 10**  
Miniature Cell Phone  
keyboard deploys out  
from storage location -  
linear and angular  
expansion mode shown